



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[EPA-HQ-OPP-2013-0653; FRL-9909-31]

Tebuconazole; Pesticide Tolerances

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes tolerances for residues of tebuconazole in or on orange and orange, oil. Bayer CropScience, LP requested these tolerances under the Federal Food, Drug, and Cosmetic Act (FFDCA).

DATES: This regulation is effective [*insert date of publication in the Federal Register*].

Objections and requests for hearings must be received on or before [*insert date 60 days after date of publication in the Federal Register*], and must be filed in accordance with the instructions provided in 40 CFR part 178 (see also Unit I.C. of the

SUPPLEMENTARY INFORMATION).

ADDRESSES: The docket for this action, identified by docket identification (ID) number EPA-HQ-OPP-2013-0653, is available at <http://www.regulations.gov> or at the Office of Pesticide Programs Regulatory Public Docket (OPP Docket) in the Environmental Protection Agency Docket Center (EPA/DC), EPA West Bldg., Rm. 3334, 1301 Constitution Ave., NW., Washington, DC 20460-0001. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the OPP Docket is (703) 305-5805. Please review the visitor

instructions and additional information about the docket available at

<http://www.epa.gov/dockets>.

FOR FURTHER INFORMATION CONTACT: Lois Rossi, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (703) 305-7090; email address: *RDFRNotices.First@epa.gov*.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

You may be potentially affected by this action if you are an agricultural producer, food manufacturer, or pesticide manufacturer. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Crop production (NAICS code 111).
- Animal production (NAICS code 112).
- Food manufacturing (NAICS code 311).
- Pesticide manufacturing (NAICS code 32532).

B. How Can I Get Electronic Access to Other Related Information?

You may access a frequently updated electronic version of EPA's tolerance regulations at 40 CFR part 180 through the Government Printing Office's e-CFR site at http://www.ecfr.gov/cgi-bin/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl.

C. How Can I File an Objection or Hearing Request?

Under FFDCFA section 408(g), 21 U.S.C. 346a, any person may file an objection to any aspect of this regulation and may also request a hearing on those objections. You must file your objection or request a hearing on this regulation in accordance with the instructions provided in 40 CFR part 178. To ensure proper receipt by EPA, you must identify docket ID number EPA-HQ-OPP-2013-0653 in the subject line on the first page of your submission. All objections and requests for a hearing must be in writing, and must be received by the Hearing Clerk on or before *[insert date 60 days after date of publication in the **Federal Register**]*. Addresses for mail and hand delivery of objections and hearing requests are provided in 40 CFR 178.25(b).

In addition to filing an objection or hearing request with the Hearing Clerk as described in 40 CFR part 178, please submit a copy of the filing (excluding any Confidential Business Information (CBI)) for inclusion in the public docket. Information not marked confidential pursuant to 40 CFR part 2 may be disclosed publicly by EPA without prior notice. Submit the non-CBI copy of your objection or hearing request, identified by docket ID number EPA-HQ-OPP-2013-0653, by one of the following methods:

- *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the online instructions for submitting comments. Do not submit electronically any information you consider to be CBI or other information whose disclosure is restricted by statute.

- *Mail*: OPP Docket, Environmental Protection Agency Docket Center (EPA/DC), (28221T), 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001.

• *Hand Delivery*: To make special arrangements for hand delivery or delivery of boxed information, please follow the instructions at <http://www.epa.gov/dockets/contacts.htm>.

Additional instructions on commenting or visiting the docket, along with more information about dockets generally, is available at <http://www.epa.gov/dockets>.

II. Summary of Petitioned-For Tolerance

In the **Federal Register** of October 25, 2013 (78 FR 63938) (FRL-9901-96), EPA issued a document pursuant to FFDCA section 408(d)(3), 21 U.S.C. 346a(d)(3), announcing the filing of a pesticide petition (PP 2E8138) by Bayer CropScience LP, P.O. Box 12014, 2 T. W. Alexander Drive, Research Triangle Park, NC 27709. The petition requested that EPA establish import tolerances for residues of the fungicide tebuconazole, in or on orange, whole fruit at 1 part per million (ppm); orange, juice at 0.15 ppm; and orange, oil at 400 ppm. That document referenced a summary of the petition prepared by Bayer CropScience LP, the registrant, which is available in the docket, <http://www.regulations.gov>. Subsequently, the petitioner submitted a revised petition that requested different tolerance levels for orange juice and orange oil. The Agency published a second notice of filing document in the **Federal Register** of February 25, 2014 (79 FR 10458) (FRL-9906-77), noting the revisions for the uses in/on orange, juice from 0.15 ppm to 0.7 ppm; orange, oil from 400 ppm to 20 ppm. There were no comments received concerning this petition.

Based upon review of the data supporting the petition, the proposed tolerance for orange, juice is unnecessary. The proposed tolerance for orange, oil was lowered. The reasons for these changes are explained in Unit IV.C.

III. Aggregate Risk Assessment and Determination of Safety

Section 408(b)(2)(A)(i) of FFDCA allows EPA to establish a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is “safe.” Section 408(b)(2)(A)(ii) of FFDCA defines “safe” to mean that “there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.” This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) of FFDCA requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to “ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue....”

Consistent with FFDCA section 408(b)(2)(D), and the factors specified in FFDCA section 408(b)(2)(D), EPA has reviewed the available scientific data and other relevant information in support of this action. EPA has sufficient data to assess the hazards of and to make a determination on aggregate exposure for tebuconazole including exposure resulting from the tolerances established by this action. EPA's assessment of exposures and risks associated with tebuconazole follows.

A. Toxicological Profile

EPA has evaluated the available toxicity data and considered its validity, completeness, and reliability as well as the relationship of the results of the studies to human risk. EPA has also considered available information concerning the variability of the sensitivities of major identifiable subgroups of consumers, including infants and

children. The hazard characterization remains unchanged from the assessment upon which the final rule published in the **Federal Register** on November 15, 2013 (78 FR 68741) (FRL-9392-1) is based.

Specific information on the studies received and the nature of the adverse effects caused by tebuconazole as well as the no-observed-adverse-effect-level (NOAEL) and the lowest-observed-adverse-effect-level (LOAEL) from the toxicity studies are discussed in the preamble to that final rule and its supporting documents as well as the most recent human health risk assessment, “Tebuconazole: Human Health Risk Assessment for Tolerance on Imported Oranges”, which can be found at <http://www.regulations.gov>, under docket ID number EPA-HQ-OPP-2013-0653-0004.

B. Toxicological Points of Departure/Levels of Concern

Once a pesticide’s toxicological profile is determined, EPA identifies toxicological points of departure (POD) and levels of concern to use in evaluating the risk posed by human exposure to the pesticide. For hazards that have a threshold below which there is no appreciable risk, the toxicological POD is used as the basis for derivation of reference values for risk assessment. PODs are developed based on a careful analysis of the doses in each toxicological study to determine the dose at which the NOAEL are observed and the LOAEL are identified. Uncertainty/safety factors are used in conjunction with the POD to calculate a safe exposure level - generally referred to as a population-adjusted dose (PAD) or a reference dose (RfD) - and a safe margin of exposure (MOE). For non-threshold risks, the Agency assumes that any amount of exposure will lead to some degree of risk. Thus, the Agency estimates risk in terms of the probability of an occurrence of the adverse effect expected in a lifetime. For more

information on the general principles EPA uses in risk characterization and a complete description of the risk assessment process, see

<http://www.epa.gov/pesticides/factsheets/riskassess.htm>.

A summary of the toxicological endpoints for tebuconazole used for human risk assessment is shown in the table contained in Unit III.B. of the preamble to the final rule published in the **Federal Register** issue of November 15, 2013.

C. Exposure Assessment

1. *Dietary exposure from food and feed uses.* In evaluating dietary exposure to tebuconazole, EPA considered exposure under the petitioned-for tolerances as well as all existing tebuconazole tolerances in 40 CFR 180.474. EPA assessed dietary exposures from tebuconazole in food as follows:

i. *Acute exposure.* Quantitative acute dietary exposure and risk assessments are performed for a food-use pesticide, if a toxicological study has indicated the possibility of an effect of concern occurring as a result of a 1-day or single exposure.

Such effects were identified for tebuconazole. In estimating acute dietary exposure, EPA used food consumption information from the United States Department of Agriculture (USDA) 2003-2008 National Health and Nutrition Examination Survey, What We Eat in America, (NHANES/WWEIA). As to residue levels in food, a somewhat refined acute probabilistic dietary exposure assessment was conducted for all existing and proposed food uses of tebuconazole. EPA used the latest USDA Pesticide Data Program (PDP) monitoring data, field trial data, percent crop treated (PCT) data and empirical and DEEM (ver. 7.81) default processing factors.

ii. *Chronic exposure.* In conducting the chronic dietary exposure assessment EPA used the food consumption data from the USDA's (NHANES/WWEIA) conducted from 2003-2008 as well. As to the residue levels in food, EPA made the following assumptions for the chronic exposure assessment: As to residue levels in food, EPA used field trial data, USDA PDP data, assumed PCT data levels and used empirical and DEEM (ver. 7.81) default processing factors as described in Unit III.C.1.iv.

iii. *Cancer.* The Agency determined that cancer dietary risk concerns due to long-term consumption of tebuconazole residues are adequately addressed by the chronic dietary exposure analysis using the reference dose; i.e., the chronic dietary risk assessments is considered to be protective of any cancer effects, and therefore, a separate cancer dietary exposure analysis was not performed.

iv. *Anticipated residue and PCT information.* Section 408(b)(2)(E) of FFDCA authorizes EPA to use available data and information on the anticipated residue levels of pesticide residues in food and the actual levels of pesticide residues that have been measured in food. If EPA relies on such information, EPA must require pursuant to FFDCA section 408(f)(1) that data be provided 5 years after the tolerance is established, modified, or left in effect, demonstrating that the levels in food are not above the levels anticipated. For the present action, EPA will issue such data call-ins as are required by FFDCA section 408(b)(2)(E) and authorized under FFDCA section 408(f)(1). Data will be required to be submitted no later than 5 years from the date of issuance of these tolerances.

Section 408(b)(2)(F) of FFDCA states that the Agency may use data on the actual percent of food treated for assessing chronic dietary risk only if:

- Condition a: The data used are reliable and provide a valid basis to show what percentage of the food derived from such crop is likely to contain the pesticide residue.
- Condition b: The exposure estimate does not underestimate exposure for any significant subpopulation group.
- Condition c: Data are available on pesticide use and food consumption in a particular area, the exposure estimate does not understate exposure for the population in such area.

In addition, the Agency must provide for periodic evaluation of any estimates used. To provide for the periodic evaluation of the estimate of PCT as required by FFDCA section 408(b)(2)(F), EPA may require registrants to submit data on PCT.

For the acute assessment, the Agency estimated the maximum PCT estimates for existing uses as follows: Almonds 2.5%; apples 2.5%; apricots 20%; barley 2.5%; beans green 2.5%; cantaloupes 10%; cherries 45%; corn 2.5%; cotton 2.5%; dry beans/peas 5%; garlic 95%; grapes 35%; onions 5%; peaches 25%; peanuts 55%; pears 5%; plums/prunes 5%; soybeans 2.5%; sweet corn 5%; and wheat 25%.

For the chronic assessment, the Agency estimated the average PCT estimates for existing uses as follows: Almonds 1%; apples 1%; apricots 10%; asparagus 5%; barley 2.5%; beans green 1%; cantaloupes 5%; cherries 30%; corn 1%; cotton 1%; dry beans/peas 2.5%; garlic 60%; grapes 20%; nectarines 10%; onions 5%; peaches 15%; peanuts 40%; pears 5%; pecans 5%; pistachios 2.5%; plums/prunes 2.5%; pumpkins 2.5%; soybeans 1%; squash 2.5%; sweet corn 2.5%; watermelons 10%; and wheat 20%.

In most cases, EPA uses available data from United States Department of Agriculture/National Agricultural Statistics Service (USDA/NASS), proprietary market

surveys, and the National Pesticide Use Database for the chemical/crop combination for the most recent 6-7 years. EPA uses an average PCT for chronic dietary risk analysis. The average PCT figure for each existing use is derived by combining available public and private market survey data for that use, averaging across all observations, and rounding to the nearest 5%, except for those situations in which the average PCT is less than one. In those cases, 1% is used as the average PCT and 2.5% is used as the maximum PCT. EPA uses a maximum PCT for acute dietary risk analysis. The maximum PCT figure is the highest observed maximum value reported within the recent 6 years of available public and private market survey data for the existing use and rounded up to the nearest multiple of 5%.

Subsequently, the Agency use estimated percent import estimates from the most recent (2013) screening level usage and analysis available for orange juice and oranges at 27.7% and 7.7%, respectively. Since usage data are not available for other countries, the Agency assumes that all of the imported orange commodities are treated.

The Agency believes that the three conditions discussed in Unit III.C.1.iv. have been met. With respect to Condition a, PCT estimates are derived from Federal and private market survey data, which are reliable and have a valid basis. The Agency is reasonably certain that the percentage of the food treated is not likely to be an underestimation. As to Conditions b and c, regional consumption information and consumption information for significant subpopulations is taken into account through EPA's computer-based model for evaluating the exposure of significant subpopulations including several regional groups. Use of this consumption information in EPA's risk assessment process ensures that EPA's exposure estimate does not understate exposure

for any significant subpopulation group and allows the Agency to be reasonably certain that no regional population is exposed to residue levels higher than those estimated by the Agency. Other than the data available through national food consumption surveys, EPA does not have available reliable information on the regional consumption of food to which tebuconazole may be applied in a particular area.

2. *Dietary exposure from drinking water.* The Agency used screening level water exposure models in the dietary exposure analysis and risk assessment for tebuconazole in drinking water. These simulation models take into account data on the physical, chemical, and fate/transport characteristics of tebuconazole. Further information regarding EPA drinking water models used in pesticide exposure assessment can be found at <http://www.epa.gov/oppefed1/models/water/index.htm>.

Based on the Pesticide Root Zone Model /Exposure Analysis Modeling System (PRZM/EXAMS) and Screening Concentration in Ground Water (SCI-GROW) models the estimated drinking water concentrations (EDWCs) of tebuconazole for acute exposures are estimated to be 87.7 parts per billion (ppb) for surface water and 1.56 ppb for ground water and for chronic exposures are estimated to be 68.8 ppb for surface water and 1.56 ppb for ground water.

Modeled estimates of drinking water concentrations were directly entered into the dietary exposure model. For the acute dietary risk assessment, a distribution of 30-year daily surface water concentrations was estimated for the EDWCs of tebuconazole. For chronic dietary risk assessment, the water concentration of value 68.8 ppb was used to assess the contribution to drinking water.

3. *From non-dietary exposure.* The term “residential exposure” is used in this document to refer to non-occupational, non-dietary exposure (e.g., for lawn and garden pest control, indoor pest control, termiticides, and flea and tick control on pets).

Tebuconazole is currently registered for the following uses that could result in residential exposures: Turf, flower gardens, trees, ornamentals, and pressure-treated wood. EPA assessed residential exposure using the following assumptions: For residential handlers, exposure is expected to be short-term. Intermediate-term exposures are not likely because of the intermittent nature of applications by homeowners. Dermal and inhalation exposures were combined since the same endpoint and POD is used for both routes of exposure. Residential post-application dermal exposure was assessed for adults and children golfing, and working in gardens. Incidental oral post-application exposure was assessed for children 1 to 2 years old performing physical activities on pressure-treated wood after application of tebuconazole. Both life stages may receive exposure to tebuconazole residues. Post-application exposure is expected to be short-term in duration. Further information regarding EPA standard assumptions and generic inputs for residential exposures may be found at <http://www.epa.gov/pesticides/trac/science/trac6a05.pdf>.

4. *Cumulative effects from substances with a common mechanism of toxicity.* Section 408(b)(2)(D)(v) of FFDCA requires that, when considering whether to establish, modify, or revoke a tolerance, the Agency consider “available information” concerning the cumulative effects of a particular pesticide's residues and “other substances that have a common mechanism of toxicity.”

Tebuconazole is a member of the triazole-containing class of pesticides, the conazoles. Although conazoles act similarly in plants by inhibiting ergosterol biosynthesis, there is not necessarily a relationship between their pesticidal activity and their mechanism of toxicity in mammals. Structural similarities do not constitute a common mechanism of toxicity. Evidence is needed to establish that the chemicals operate by the same, or essentially the same, sequence of major biochemical events. In conazoles, however, a variable pattern of toxicological responses is found; some are hepatotoxic and hepatocarcinogenic in mice. Some induce thyroid tumors in rats. Some induce developmental, reproductive, and neurological effects in rodents. Furthermore, the conazoles produce a diverse range of biochemical events, including altered cholesterol levels, stress responses, and altered DNA methylation. It is not clearly understood whether these biochemical events are directly connected to their toxicological outcomes. Thus, there is currently no conclusive data to indicate that conazoles share common mechanisms of toxicity and EPA is not following a cumulative risk approach based on a common mechanism of toxicity for the conazoles. For information regarding EPA's procedures for cumulating effects from substances found to have a common mechanism of toxicity, see EPA's Web site at <http://www.epa.gov/pesticides/cumulative>.

Tebuconazole is a triazole-derived pesticide. This class of compounds can form the common metabolite 1,2,4-triazole and two triazole conjugates (triazolylalanine and triazolylacetic acid). To support existing tolerances and to establish new tolerances for triazole-derivative pesticides, including tebuconazole, EPA conducted a human health risk assessment for exposure to 1,2,4-triazole, triazolylalanine, and triazolylacetic acid resulting from the use of all current and pending uses of any triazole-derived fungicide.

The risk assessment is a highly conservative, screening-level evaluation in terms of hazards associated with common metabolites (e.g., use of a maximum combination of uncertainty factors) and potential dietary and non-dietary exposures (i.e., high end estimates of both dietary and non-dietary exposures). In addition, the Agency has reduced the 10X Food Quality Protection Act safety factor (FQPA SF) to 3X. The FQPA SF has been retained as an uncertainty factor for use of a LOAEL to extrapolate a NOAEL uncertainty factor (UF_L). The Agency's complete risk assessment is found in the propiconazole reregistration docket at <http://www.regulations.gov>, docket ID number EPA-HQ-OPP-2005-0497.

An updated dietary exposure and risk analysis for the common triazole metabolites 1,2,4-triazole (T), triazolylalanine (TA), triazolylacetic acid (TAA), and triazolylpyruvic acid (TP) was conducted and completed in October 2013, in association with a registration request for several other triazole fungicides. That analysis concluded that risk estimates were below the Agency's level of concern for all population groups. The addition of tolerances associated with this action to the exposure analyses do not significantly increase the exposure to triazole and its conjugates. This assessment may be found on <http://www.regulations.gov> by searching for the following titles and docket numbers: "Common Triazole Metabolites: Updated Aggregate Human Health Risk Assessment to Address The New Section 3 Registrations For Use of Prothioconazole on Rapeseed Crop Subgroup 20A; Use of Difenconazole on Rapeseed Crop Subgroup 20A; and Use of Tebuconazole on Imported Oranges", located in docket ID number EPA-HQ-OPP-2013-0653-0005.

D. Safety Factor for Infants and Children

1. *In general.* Section 408(b)(2)(C) of FFDCA provides that EPA shall apply an additional tenfold (10X) margin of safety for infants and children in the case of threshold effects to account for prenatal and postnatal toxicity and the completeness of the database on toxicity and exposure unless EPA determines based on reliable data that a different margin of safety will be safe for infants and children. This additional margin of safety is commonly referred to as the FQPA Safety Factor (SF). In applying this provision, EPA either retains the default value of 10X, or uses a different additional safety factor when reliable data available to EPA support the choice of a different factor.

2. *Prenatal and postnatal sensitivity.* The toxicity database for tebuconazole includes prenatal developmental toxicity studies in three species (mouse, rat, and rabbit), a reproductive toxicity study in rats, acute and subchronic neurotoxicity studies in rats, and a developmental neurotoxicity study in rats. The data from prenatal developmental toxicity studies in mice and a developmental neurotoxicity study in rats indicated an increased quantitative and qualitative susceptibility following *in utero* exposure to tebuconazole. The NOAELs/LOAELs for developmental toxicity in these studies were found at dose levels less than those that induce maternal toxicity or in the presence of slight maternal toxicity. There was no indication of increased quantitative susceptibility in the rat and rabbit developmental toxicity studies, the NOAELs for developmental toxicity were comparable to or higher than the NOAELs for maternal toxicity. In all three species, however, there was indication of increased qualitative susceptibility. For most studies, minimal maternal toxicity was seen at the LOAEL (consisting of increases in hematological findings in mice, increased liver weights in rabbits and rats, and decreased

body weight gain/food consumption in rats) and did not increase substantially in severity at higher doses. However, there was more concern for the developmental effects at each LOAEL, which included increases in runts, increased fetal loss, and malformations in mice; increased skeletal variations in rats; and increased fetal loss and frank malformations in rabbits. Additionally, more severe developmental effects (including frank malformations) were seen at higher doses in mice, rats and rabbits. In the developmental neurotoxicity study, maternal toxicity was seen only at the high dose (decreased body weights, body weight gains, and food consumption, prolonged gestation with mortality, and increased number of dead fetuses), while offspring toxicity (including decreases in body weight, brain weight, brain measurements, and functional activities) was seen at all doses.

Available data indicated greater sensitivity of the developing organism to exposure to tebuconazole, as demonstrated by increases in qualitative sensitivity in prenatal developmental toxicity studies in rats, mice, and rabbits, and by increases in both qualitative and quantitative sensitivity in the developmental neurotoxicity study in rats with tebuconazole. However, the degree of concern is low because the toxic endpoints in the prenatal developmental toxicity studies were well characterized with clear NOAELs established and the most sensitive endpoint, which is found in the developmental neurotoxicity study, has been used for overall risk assessments. Therefore, there are no residual uncertainties for prenatal and/or postnatal susceptibility.

3. *Conclusion.* EPA has determined that reliable data show the safety of infants and children would be adequately protected if the FQPA SF were reduced to 3X. That decision is based on the following findings:

- i. The toxicity database for tebuconazole is complete.
- ii. Tebuconazole demonstrated neurotoxicity in the acute neurotoxicity study in rats; the LOAEL of 100 milligrams/kilogram/day (mg/kg/day) was based on increased motor activity in male and female rats and decreased footsplay in female rats.

Malformations indicative of nervous system development disruption were seen in developmental toxicity studies in mice, rats, and rabbits. Neurotoxicity was also seen in offspring in the developmental neurotoxicity study in rats. The LOAEL of 8.8 mg/kg/day was based on decreases in body weights, decreases in absolute brain weights, changes in brain morphometric parameters, and decreases in motor activity. A NOAEL could not be established. However, the LOAEL (8.8 mg/kg/day) was employed as the point of departure in assessing the risk for all exposure scenarios, and the FQPA SF is retained as a UF_L (i.e., use of a LOAEL to extrapolate a NOAEL). A Benchmark Dose (BMD) analysis of the datasets relevant to the adverse offspring effects (decreased body weight and brain weight) seen at the LOAEL in the DNT study was conducted. All of the BMDLs (benchmark dose limit) modeled successfully on statistically significant effects are 1-2X lower than the LOAEL. The results also indicate that an extrapolated NOAEL is not likely to be 10X lower than the LOAEL and that use of an UF_L of 3X would not underestimate risk. Therefore, the analysis supports reducing the UF_L from 10X to 3X. Using an UF_L of 3X in risk assessment ($8.8 \text{ mg/kg/day} \div 3x = 2.9 \text{ mg/kg/day}$) is further supported by other studies in the tebuconazole toxicity database: Those studies with the lowest NOAELs were a developmental toxicity study in mice at 3 mg/kg/day and a chronic toxicity study in dogs at 2.9 mg/kg/day, with effects being seen at respective LOAELs of 10 and 4.5 mg/kg/day.

iii. Although there is qualitative evidence of increased susceptibility in the prenatal developmental studies in rats, the Agency did not identify any residual uncertainties after establishing toxicity endpoints and traditional UFs to be used in the risk assessment of tebuconazole. The degree of concern for residual uncertainties for prenatal and/or postnatal toxicity is low.

iv. There are no residual uncertainties identified in the exposure databases. EPA utilized a tiered approach in estimating exposure to tebuconazole. While some refinements were incorporated into dietary and residential exposure calculations, EPA is confident that the aggregate risk from exposure to tebuconazole in food, water and residential pathways will not be underestimated. The acute and chronic dietary exposure assessments incorporated refined estimates of residues in food commodities from reliable field trial data reflecting maximum use conditions, recent monitoring data from USDA's PDP, and relevant market survey data on the percentage of crops treated. Estimated concentrations of tebuconazole in drinking water were incorporated into the chronic dietary analysis as the upper bound point estimate and into the probabilistic acute dietary analysis as a distribution. For the residential exposure pathway (ornamentals, golf course turf, and treated wood products), potential exposure resulting from tebuconazole outdoor uses in the residential setting was assessed using screening-level inputs that assumes an adult or child will come in contact with turf and other surfaces immediately after application.

E. Aggregate Risks and Determination of Safety

EPA determines whether acute and chronic dietary pesticide exposures are safe by comparing aggregate exposure estimates to the acute PAD (aPAD) and chronic PAD

(cPAD). For linear cancer risks, EPA calculates the lifetime probability of acquiring cancer given the estimated aggregate exposure. Short-, intermediate-, and chronic-term risks are evaluated by comparing the estimated aggregate food, water, and residential exposure to the appropriate PODs to ensure that an adequate MOE exists.

1. *Acute risk.* Using the exposure assumptions discussed in this unit for acute exposure, the acute dietary exposure from food and water to tebuconazole will occupy 84% of the aPAD for children 1-2 years old, the population group receiving the greatest exposure.

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that chronic exposure to tebuconazole from food and water will utilize 14.3% of the cPAD for all infants <1 year old, the population group receiving the greatest exposure. Based on the explanation in Unit III.C.3., regarding residential use patterns, chronic residential exposure to residues of tebuconazole is not expected.

3. *Short-term risk.* Short-term aggregate exposure takes into account short-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

Tebuconazole is currently registered for uses that could result in short-term residential exposure, and the Agency has determined that it is appropriate to aggregate chronic exposure through food and water with short-term residential exposures to tebuconazole.

Using the exposure assumptions described in this unit for short-term exposures, EPA has concluded the combined chronic food, water, and short-term residential exposures result in aggregate MOEs of 310 for adult handlers (post-application); 1,200

for children 11-16 years old (post-application); 510 for children 6-11 years old (post-application); and 350 for children 1-2 years old (post-application). Because EPA's level of concern for tebuconazole is a MOE of 300 or below, these MOEs are not of concern.

4. *Intermediate-term risk.* Intermediate-term aggregate exposure takes into account intermediate-term residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

An intermediate-term adverse effect was identified; however, tebuconazole is not registered for any use patterns that would result in intermediate-term residential exposure. Intermediate-term risk is assessed based on intermediate-term residential exposure plus chronic dietary exposure. Because there is no intermediate-term residential exposure and chronic dietary exposure has already been assessed under the appropriately protective cPAD (which is at least as protective as the POD used to assess intermediate-term risk), no further assessment of intermediate-term risk is necessary, and EPA relies on the chronic dietary risk assessment for evaluating intermediate-term risk for tebuconazole.

5. *Aggregate cancer risk for U.S. population.* Based on the results of the chronic risk assessment, which the Agency considers to be protective of any cancer effects, the Agency concludes that there is no cancer risk from aggregate exposure to tebuconazole.

6. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, or to infants and children from aggregate exposure to tebuconazole residues.

IV. Other Considerations

A. Analytical Enforcement Methodology

Adequate enforcement methodology (Gas chromatography/Nitrogen Phosphorus Detector (GC/NPD) Method 101341) is available to enforce the tolerance expression.

The method may be requested from: Chief, Analytical Chemistry Branch, Environmental Science Center, 701 Mapes Rd., Ft. Meade, MD 20755-5350; telephone number: (410) 305-2905; email address: *residuemethods@epa.gov*.

B. International Residue Limits

In making its tolerance decisions, EPA seeks to harmonize U.S. tolerances with international standards whenever possible, consistent with U.S. food safety standards and agricultural practices. EPA considers the international maximum residue limits (MRLs) established by the Codex Alimentarius Commission (Codex), as required by FFDCA section 408(b)(4). The Codex Alimentarius is a joint United Nations Food and Agriculture Organization/World Health Organization food standards program, and it is recognized as an international food safety standards-setting organization in trade agreements to which the United States is a party. EPA may establish a tolerance that is different from a Codex MRL; however, FFDCA section 408(b)(4) requires that EPA explain the reasons for departing from the Codex level.

There are no Codex, Canadian or Mexican MRLs for tebuconazole in/or on orange, oil and orange, juice.

C. Revisions to Petitioned-For Tolerances

Based on the analysis of orange processing data, EPA lowered the tolerance level for orange, oil to 10 ppm. Tolerances for orange, juice were unnecessary since the raw agricultural commodity tolerance of 1ppm covers the proposed juice tolerance.

V. Conclusion

Therefore, tolerances are established for residues of tebuconazole, in or on orange, oil at 10 ppm and orange, juice at 1.0 ppm.

VI. Statutory and Executive Order Reviews

This final rule establishes tolerances under FFDCA section 408(d) in response to a petition submitted to the Agency. The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled “Regulatory Planning and Review” (58 FR 51735, October 4, 1993). Because this final rule has been exempted from review under Executive Order 12866, this final rule is not subject to Executive Order 13211, entitled “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use” (66 FR 28355, May 22, 2001) or Executive Order 13045, entitled “Protection of Children from Environmental Health Risks and Safety Risks” (62 FR 19885, April 23, 1997). This final rule does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 *et seq.*), nor does it require any special considerations under Executive Order 12898, entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” (59 FR 7629, February 16, 1994).

Since tolerances and exemptions that are established on the basis of a petition under FFDCA section 408(d), such as the tolerance in this final rule, do not require the

issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), do not apply.

This final rule directly regulates growers, food processors, food handlers, and food retailers, not States or tribes, nor does this action alter the relationships or distribution of power and responsibilities established by Congress in the preemption provisions of FFDCA section 408(n)(4). As such, the Agency has determined that this action will not have a substantial direct effect on States or tribal governments, on the relationship between the national government and the States or tribal governments, or on the distribution of power and responsibilities among the various levels of government or between the Federal Government and Indian tribes. Thus, the Agency has determined that Executive Order 13132, entitled “Federalism” (64 FR 43255, August 10, 1999) and Executive Order 13175, entitled “Consultation and Coordination with Indian Tribal Governments” (65 FR 67249, November 9, 2000) do not apply to this final rule. In addition, this final rule does not impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) (2 U.S.C. 1501 *et seq.*).

This action does not involve any technical standards that would require Agency consideration of voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA) (15 U.S.C. 272 note).

VII. Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 *et seq.*), EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: April 28, 2014.

Lois Rossi,

Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180--[AMENDED]

1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 321(q), 346a and 371.

2. In § 180.474, in the table in paragraph (a)(1), add alphabetically entries for “Orange¹” and “Orange, oil¹” and revise footnote 1 to read as follows:

§ 180.474 Tebuconazole; tolerances for residues.

(a) * * * (1) * * *

Commodity	Parts per million
* * * *	
Orange ¹	1.0
Orange, oil ¹	10
* * * *	

¹There are no U.S. registrations.

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